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☐ 1: NP_066961. Reports TNF receptor-asso...[gi:22027612]

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LOCUS NP_066961 501 aa linear PRI 27-NOV-2005
DEFINITION TNF receptor-associated factor 2 [Homo sapiens].
ACCESSION NP_066961 NP_663770
VERSION NP_066961.2 GI:22027612
DBSOURCE REFSEQ: accession NM_021138.3
KEYWORDS .
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
REFERENCE 1 (residues 1 to 501)
AUTHORS Yang, C.H., Murti, A. and Pfeffer, L.M.
TITLE Interferon induces NF-kappa B-inducing kinase/tumor necrosis factor
receptor-associated factor-dependent NF-kappa B activation to
promote cell survival
J. Biol. Chem. 280 (36), 31530-31536 (2005)
PUBMED 16009713
REMARK GeneRIF: Results for the first time place tumor necrosis factor
receptor-associated factor-2 (TRAF2), previously shown to function
in TNF signaling, within the interferon signal transduction pathway
REFERENCE 2 (residues 1 to 501)
AUTHORS Esparza, E.M. and Arch, R.H.
TITLE Glucocorticoid-induced TNF receptor, a costimulatory receptor on
naive and activated T cells, uses TNF receptor-associated factor 2
in a novel fashion as an inhibitor of NF-kappa B activation
J. Immunol. 174 (12), 7875-7882 (2005)
PUBMED 15944293
REMARK GeneRIF: In contrast with its effects on signaling triggered by
other TNF receptors, functional studies reveal that TRAF2 plays a
novel inhibitory role in glucocorticoid-induced TNF receptor
(GITR)-triggered NF-kappa B activation.
REFERENCE 3 (residues 1 to 501)
AUTHORS Kim, W.J., Back, S.H., Kim, V., Ryu, I. and Jang, S.K.
TITLE Sequestration of TRAF2 into stress granules interrupts tumor
necrosis factor signaling under stress conditions
Mol. Cell. Biol. 25 (6), 2450-2462 (2005)
PUBMED 15743837
REMARK GeneRIF: TRAF2 colocalizes with eIF4GI in insoluble stress granules
during cellular exposure to stress conditions.
REFERENCE 4 (residues 1 to 501)
AUTHORS Hauer, J., Puschner, S., Ramakrishnan, P., Simon, U., Bongers, M.,
Federle, C. and Engelmann, H.
TITLE TNF receptor (TNFR)-associated factor (TRAF) 3 serves as an
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Proc. Natl. Acad. Sci. U.S.A. 102 (8), 2874-2879 (2005)
PUBMED 15708970
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REFERENCE 5 (residues 1 to 501)
AUTHORS He, L., Grammer, A.C., Wu, X. and Lipsky, P.E.
TITLE TRAF3 forms heterotrimers with TRAF2 and modulates its ability to
mediate NF-kappaB activation
J. Biol. Chem. 279 (53), 55855-55865 (2004)
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REMARK GeneRIF: there is a novel association between TRAF2 and TRAF3 that
is mediated by unique portions of each protein and that
specifically regulates activation of NF-kappaB, but not AP-1
REFERENCE 6 (residues 1 to 501)
AUTHORS Zhang, H., Zhang, R., Luo, Y., D'Alessio, A., Pober, J.S. and Min, W.
TITLE AIP1/DAB2IP, a novel member of the Ras-GAP family, transduces
TRAF2-induced ASK1-JNK activation
J. Biol. Chem. 279 (43), 44955-44965 (2004)
PUBMED 15310755
REMARK GeneRIF: AIP1 is a novel transducer in TNF-induced TRAF2-dependent
activation of ASK1 that mediates a balance between JNK versus

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REFERENCE
AUTHORS Vischioni, B., Giaccone, G., Span, S.W., Kruyt, F.A. and Rodriguez, J.A.
TITLE Nuclear shuttling and TRAF2-mediated retention in the cytoplasm regulate the subcellular localization of cIAP1 and cIAP2
JOURNAL Exp. Cell Res. 298 (2), 535-548 (2004)
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REMARK GeneRIF: TRAF2 plays an important role as regulator of IAP nucleocytoplasmic localization, by preventing nuclear translocation of cIAP1 and cIAP2.

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REFERENCE
AUTHORS Fotin-Mieczek, M., Henkler, F., Hausser, A., Glauner, H., Samel, D., Graness, A., Scheurich, P., Mauri, D. and Wajant, H.
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JOURNAL J. Biol. Chem. 279 (1), 677-685 (2004)
PUBMED 14557256
REMARK GeneRIF: stoichiometry of TRAF1-TRAF2 heteromeric complexes ((TRAF2)2-TRAF1 versus TRAF2-(TRAF1)2) determines their capability to mediate CD40 signaling but has no major effect on TNF signaling

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REFERENCE
AUTHORS Sakurai, H., Suzuki, S., Kawasaki, N., Nakano, H., Okazaki, T., Chino, A., Doi, T. and Saiki, I.
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PUBMED 12842894
REMARK GeneRIF: TRAF2 has a role in TNF-alpha induced IKK phosphorylation of NF-kappaB p65

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REFERENCE
AUTHORS Kaneko, M., Niinuma, Y. and Nomura, Y.
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JOURNAL Biol. Pharm. Bull. 26 (7), 931-935 (2003)
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AUTHORS Shi, C.S. and Kehrl, J.H.
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REFERENCE
AUTHORS Kuai, J., Nickbarg, E., Wooters, J., Qiu, Y., Wang, J. and Lin, L.L.
TITLE Endogenous association of TRAF2, TRAF3, cIAP1, and Smac with lymphotoxin beta receptor reveals a novel mechanism of apoptosis
JOURNAL J. Biol. Chem. 278 (16), 14363-14369 (2003)
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TITLE Regulation of TRAF2 signaling by self-induced degradation
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AUTHORS Eliopoulos, A.G., Davies, C., Blake, S.S., Murray, P., Najafipour, S.,
Tsichlis, P.N. and Young, L.S.
TITLE The oncogenic protein kinase Tpl-2/Cot contributes to Epstein-Barr
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REMARK GeneriP: TNF-RII and c-IAP1 mediate its ubiquitination

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AUTHORS Cao, H., Courchesne, W.E. and Mastick, C.C.
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role for phosphorylation of caveolin-1 on tyrosine 14: recruitment
of C-terminal Src kinase
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D'Andrea, R.J., Gamble, J.R. and Vadas, M.A.
TITLE Sphingosine kinase interacts with TRAF2 and dissects tumor necrosis
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REFERENCE 24 (residues 1 to 501)
AUTHORS Yan, M., Zhang, Z., Brady, J.R., Schilbach, S., Fairbrother, W.J. and
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 TITLE A novel family of putative signal transducers associated with the
 cytoplasmic domain of the 75 kDa tumor necrosis factor receptor
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 PUBMED 8069916
 COMMENT REVIEWED REFSEQ: This record has been curated by NCBI staff. The
 reference sequence was derived from BC064662.1 and BC043492.1.
 On or before Feb 13, 2004 this sequence version replaced
 gi:22027614, gi:10863939.

Summary: The protein encoded by this gene is a member of the TNF
 receptor associated factor (TRAF) protein family. TRAF proteins
 associate with, and mediate the signal transduction from members of
 the TNF receptor superfamily. This protein directly interacts with
 TNF receptors, and forms a heterodimeric complex with TRAF1. This
 protein is required for TNF-alpha-mediated activation of MAPK8/JNK
 and NF-kappaB. The protein complex formed by this protein and TRAF1
 interacts with the inhibitor-of-apoptosis proteins (IAPs), and
 functions as a mediator of the anti-apoptotic signals from TNF
 receptors. The interaction of this protein with TRADD, a TNF
 receptor associated apoptotic signal transducer, ensures the
 recruitment of IAPs for the direct inhibition of caspase
 activation. BIRC2/c-IAP1, an apoptosis inhibitor possessing
 ubiquitin ligase activity, can ubiquitinate and induce the
 degradation of this protein, and thus potentiate TNF-induced
 apoptosis. Multiple alternatively spliced transcript variants have
 been found for this gene, but the biological validity of only one
 transcript has been determined.

FEATURES Location/Qualifiers

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